

Antares



The Newsletter of the Kansas Astronomical Observers

Meeting time: **December 15, 2018** **3:00 pm**

Location: **Great Plains Nature Center (GPNC)**

Speaker: **None**
Topic: **None**

KAO Website: <http://www.kaowichita.com>
The Night Sky Network: <http://www.nightsky.jpl.nasa.gov>
The Astronomical League: <http://www.astroleague.org>

If you have comments or suggestions for an article in the newsletter, e-mail them to:
kevin.l.kight@gmail.com *Please begin the subject line with "Antares"

Current Club Officials

President:	Jerelyn Ramirez	jerelyn.ramirez@gmail.com
Vice-President:	Tony Haidai	thaidai@cox.net
Treasurer:	Paul Ramirez	ramirezpm2@gmail.com
Newsletter/Media:	Kevin Kight	kevin.l.kight@gmail.com

Next Month's Meeting: January 19 @ 3:00pm, Great Plains Nature Center (GPNC)

Club Updates:

Call for Meeting Speakers:

For those members that wish to create and present during a club meeting, or that have a suggestion for a guest speaker during the fall and winter meetings, contact the Club Vice-President: Tony Haidai (thaidai@cox.net)

Newsletter Items for Publication:

Please submit items for publication prior to the 10th of each month to be included in that month's newsletter.

Eyepieces for Sale:

See addendum for a collection of TeleVue Eyepieces club member David Stanislaw is wishing to sell. Just a note that the prices are his asking price, and is open to negotiation.

New Club T-shirts available:

Club T-Shirts are in for those who ordered one, they can be picked up at the meeting. Make check out to KAO if you plan to pay by check.

Astronomical League Program Awards:

Congratulations to those that have completed the programs. See attached for

Binocular Double Star Program



Jerelyn Ramirez has earned from the Astronomical League the Binocular Double Star Program.

It was required to observe 50 double stars from a list of 120. Five double star pairs of those 50 were required to be viewed as naked eye, if the observer was unable to view any naked eye then the observer was required to view up to 55 double stars. Jerelyn was able to split five of the 50 objects naked eye. This is the exception rather than the rule for participants in this program.

Sky Puppy Program

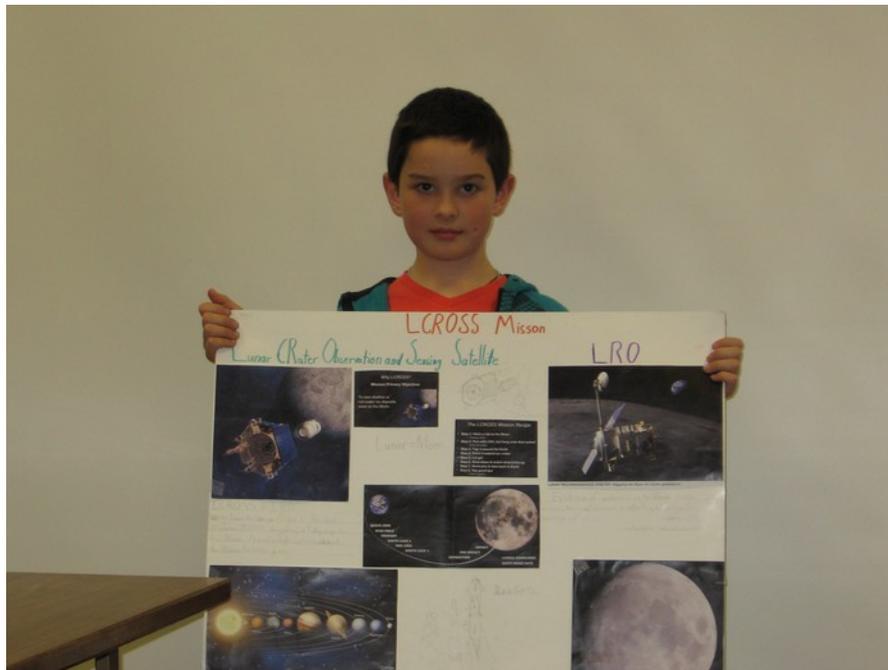


Also we have a Sky Puppy that has completed the program from the Astronomical League. His name is **Matthew Palmeri** from Saint Marys, Kansas. An award ceremony will be held at the library in Saint Marys, Kansas. Matthew is 10 years old. He started this program as a 9 year old. Jerelyn Ramirez mentored Matthew Palmeri. Matthew's mother, Kelli, would come to the outdoor observing programs. She was just as excited

about learning the night sky as Matthew. There will be a story in the local newspaper when Matthew is presented with his Certificate and Pin. The required projects to complete this program are:

1. Draw 15 Constellations
2. Identify 15 Constellations in the night sky
3. Identify major stars and objects in each constellation
4. Tell 2 mythical constellation stories
5. Locate & Identify 5 Deep Space Objects with Binoculars
6. Identify & describe the Milky Way in the night sky
7. Locate & Identify the North Star (Polaris) or Crux
8. Kept a log including notes of each observation
9. Draw a sketch of a solar system object (he drew moon craters)
10. Research and give presentation on robotic space mission

70% of the projects are outside in the night sky with 30% as classroom projects. Matthew completed the program in 16.25 hours. 9 hours of classroom and 7.25 hours out under the stars. His presentation was on the LCROSS and LRO missions to the Moon.



November Club Meeting:

See addendum for a short summary about the November club meeting.

Astronomy Calendars are now available:

Contact [Paul Ramirez](#) to reserve your calendar today. Supply is limited but we can order more if needed. There will be some available at the meeting.

Solar and Planetary Items:

Moon Phases:

Last Quarter: November 29
New Moon: December 7
First Quarter: December 15
Full Moon: December 22

Last Quarter: December 29
New Moon: January 5
First Quarter: January 17
Full Moon: January 20

Planets:

Mercury – Visible in the morning in Libra; rising approximately 6:00 am

Venus – Visible in the morning in Virgo; rises approximately 4:00 am

Mars – Visible after sunset south in Aquarius; setting approximately 12:00 am

Jupiter – Hidden by Solar Glare

Saturn – Hidden by Solar Glare

Uranus – Visible in Aries; transiting approximately 9:00pm

Neptune – Visible in Aquarius; setting approximately 11:55 pm

- Geminid meteor Shower Peaks the evenings of December 13th-14th
- Winter Solstice is on December 21st
- A total lunar eclipse will be visible next month on the evening of January 20th with totality occurring at 10:41pm Local time.

Comets:

Listed below are comets possibly visible in telescopes from the Wichita area (approximately cutoff at magnitude 15; if available the observed magnitude is used in favor of the JPL prediction). Magnitudes shown are approximate predictions for mid-month. Links are provided for additional information: <http://cometchasing.skyhound.com/>

21P/Giacobini-Zinner: An all night comet in Puppis, nearing perihelion

Magnitude 14.0

<https://theskylive.com/21p-info>

38P/Stephan-Oterma: An all night comet in Cancer

Magnitude 10.0

<https://theskylive.com/38p-info>

64P/Swift-Gehrels: An all night comet in Triangulum

Magnitude 14.5

<https://theskylive.com/64p-info>

46P/Wirtanen: A bright all night comet moving into Taurus

Magnitude: 4.9

<https://theskylive.com/46p-info>

Event Reports:

If you've participated in a club event, please submit an event report to be included here by the 10th of each month. It doesn't have to be anything formal, just a brief description about the event and how it went. Credit will be given unless you request to be kept anonymous.

Heights Astronomy Night

See Addendum for a report of the eights Astronomy Night at the Heights High School outreach event.

Upcoming Regional Events:

Fall River Star Party

August 2-3, 2019

Upcoming KAO/Public Events:

Featured Article:



This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.org to find local clubs, events, and more!

**NASA Night Sky Notes:
Observe Apollo 8's Lunar Milestones**
By David Prosper

December marks the 50th anniversary of NASA's Apollo 8 mission, when humans first orbited the Moon in a triumph of human engineering. The mission may be most famous for "Earthrise," the iconic photograph of Earth suspended over the rugged lunar surface. "Earthrise" inspired the imaginations of people around the world and remains one of the most famous photos ever taken. This month also brings a great potential display of the Geminids and a close approach by Comet 46P/Wirtanen

You can take note of Apollo 8's mission milestones while observing the Moon this month. Watch the nearly full Moon rise just before sunset on December 21, exactly 50 years after Apollo 8 launched; it will be near the bright orange star Aldebaran in Taurus. The following evenings watch it pass over the top of Orion and on through Gemini; on those days five decades earlier, astronauts Frank Borman, Jim Lovell, and Bill Anders sped towards the Moon in their fully crewed command module. Notice how the Moon rises later each evening, and how its phase wanes from full on Dec 22 to gibbous through the rest of the week. Can you imagine what phase Earth would appear as if you were standing on the Moon, looking back? The three brave astronauts spent 20 sleepless hours in orbit around the Moon, starting on Dec 24, 1968. During those ten orbits they became the first humans to see with their own eyes both the far side of the Moon and an Earthrise! The crew telecast a holiday message on December 25 to a record number of Earthbound viewers as they orbited over the lifeless lunar terrain; "Good night, good luck, a merry Christmas and God bless all of you - all of you on the good Earth." 50 years later, spot the Moon on these holiday evenings as it travels through Cancer and Leo. Just two days later the astronauts splashed down into the Pacific Ocean after achieving all the mission's test objectives, paving the way for another giant leap in space exploration the following year.

The Geminids, an excellent annual meteor shower, peaks the evening of December 13 through the morning of the 14th. They get their chance to truly shine after a waxing crescent Moon sets around 10:30 pm on the 13th. Expert Geminid observers can spot around 100 meteors per hour under ideal conditions. You'll spot quite a few meteors by avoiding bad weather and light pollution if you can, and of course make sure to bundle up and take frequent warming breaks.

The Geminids have an unusual origin compared to most meteor showers, which generally spring from icy comets. The tiny particles Earth passes through these evenings come from a strange “rock comet” named asteroid 3200 Phaethon. This dusty asteroid experiences faint outbursts of fine particles of rock instead of ice.

You can also look for comet 46P/Wirtanen while you’re out meteor watching. Its closest approach to Earth brings it within 7.1 million miles of us on December 16. That’s 30 times the average Earth-Moon distance! While passing near enough to rank as the 10th closest cometary approach in modern times, there is no danger of this object striking our planet. Cometary brightness is hard to predict, and while there is a chance comet 46P/Wirtanen may flare up to naked eye visibility, it will likely remain visible only via binoculars or telescopes. You’ll be able to see for yourself how much 46P/Wirtanen actually brightens. Some of the best nights to hunt for it will be December 15 and 16 as it passes between two prominent star clusters in Taurus: the Pleiades and the V-shaped Hyades. Happy hunting!

Catch up on all of NASA’s past, current, and future missions at [nasa.gov](https://www.nasa.gov)



Caption: Earthrise, 1968. Note the phase of Earth as seen from the Moon. Nearside lunar observers see Earth go through a complete set of phases. However, only orbiting astronauts witness Earthrises; for stationary lunar observers, Earth barely moves at all. Why is that?

Credit: Bill Anders/NASA